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David W. Hacker
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August 31, 2016

VIA ELECTRONIC DELIVERY AND OVERNIGHT DELIVERY

Attn: Compliance Tracker, AE-17J
Air Enforcement and Compliance Assurance Branch
U.S. Environmental Protection Agency - Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Re: United States Steel Corporation – Minntac
Response to Section 114 Information Collection Request

Dear U. S. EPA Region V Representative:

On or about August 9, 2016, United States Steel Corporation ("U. S. Steel") received a Clean Air Act Section 114 Request for Information regarding Minntac. Per our teleconference on August 16, 2016, and as memorialized in an email sent to U. S. Steel later that day, U.S. EPA has agreed to accept a response by August 31, 2016 as timely. During that teleconference and as expressed in that email message, EPA further agreed that:

- 1) U. S. Steel can exclude anything previously submitted to EPA under the 2012 section 114 information request.
- 2) U. S. Steel can exclude anything submitted to EPA under the subsequent settlement discussions; and
- 3) U. S. Steel can exclude any internal e-mails and non-substantive e-mails with manufacturers and engineering firms.

Finally, EPA has agreed to limit all requests to the period April 2012 to the present.

U. S. Steel appreciates EPA's agreement to narrow the scope of this 114 request. U. S. Steel nonetheless emphasizes that, while it is responding to EPA's request, this request was not issued for its purported purpose. The request targets information that is subject to ongoing litigation between EPA and U. S. Steel. It also does not seek information within the scope of 42 U.S.C. § 7411(a). The request purports to seek information "to determine whether [U. S. Steel's] emission source is complying with the Clean Air Act," but the information sought is not required for any demonstration of compliance. The Request therefore is not "reasonably relevant to an authorized investigation" and could not "uncover an existing or imminent CAA violation." *United States v. Xcel Energy, Inc.*, 759 F. Supp. 2d 1106, 1114 (D. Minn. 2010). U. S. Steel questions the relevance and probative value of some of these Requests, and by providing a response, U. S. Steel does not concede to the relevance or materiality of the

information sought by any request or subject matter to which they refer, nor does U. S. Steel waive any such objections. U. S. Steel specifically objects to any definition or Request that can be interpreted to impose on U. S. Steel an obligation to collect or create information greater than that imposed by §114 of the Clean Air Act. U. S. Steel objects to the Requests to the extent any request or the terms therein are vague and ambiguous.

U. S. Steel also objects to the Requests to the extent the Agency is using them as a discovery tool when the proceedings regarding the on-going litigation have been stayed by the Court. U. S. Steel also questions the appropriateness of issuing the 114 Requests when U. S. Steel has openly communicated with, provided numerous documents to, and has cooperated with the Agency during settlement negotiations.

U. S. Steel and EPA have enjoyed a cooperative relationship in building the technical bases necessary for implementation of feasible and achievable BART limits. These discussions remain ongoing and have resulted in the development of considerable new information. U. S. Steel respectfully refers to information previously submitted to EPA in response to the April 2012 Section 114 requests, information that U. S. EPA obtained during its comprehensive tour of Minntac on April 18, 2012, and information that has been shared with the Agency in response to the numerous inquiries during the settlement discussions. Because U. S. Steel desires to continue a constructive dialogue with the Agency regarding this matter, but subject to the above limitations and objections, and without waiving any such objections, U. S. Steel submits the following responses:

U.S. EPA Request No. 1:

Provide the following information for indurating furnace lines 3, 4 and 5:

- a) The most recent two years of hourly emissions data for each furnace in pounds of nitrogen oxide per million British thermal units (lbs NO_x/MMBTUs). The data should be provided and clearly identified for all operating scenarios: co-fired (natural gas and coal), natural gas, as well as any data for biomass (presumably with natural gas). More than two years of emissions data should be provided if the most recent two years of data does not provide information for all operating scenarios.
- b) The most recent two years of hourly emissions data for each furnace in terms of lbs NO_x/MMBTUs on both an hourly basis and also as 720-hourly-averages. The data should be provided and clearly identified for all operating scenarios: co-fired (natural gas and coal), natural gas, as well as any data for biomass (presumably with natural gas). More than two years of emissions data should be provided if the most recent two years of data does not provide information for all operating scenarios.

U. S. Steel Response to Request No. 1:

Person(s) : that provided information used or considered in responding to the question or were consulted in the preparation of the response:

Stephani Campbell, Steven Maslo

See the referenced electronic data that is responsive to this request. Hourly data for Lines 3, 4, and 5 are provided in this request. Due to limited NO_x data on 100% natural gas on these lines and limited NO_x data during the production of acid pellets (no flux addition), data was retrieved back to January 1, 2012 to provide a more robust data set. The combustion operating scenario is identified for each hour along with the pellet type. U. S. Steel does not currently record a 720 hourly average by fuel type, therefore only hourly data is available and therefore provided. Data substitution consistent with State reporting requirements is utilized in the attached spreadsheet. Please refer to the CEMS coding tab to understand what the various codes stand for and when data substitution is utilized.

U.S. EPA Request No. 2:

For indurating furnace line 5, provide a detailed description of all NO_x controls that have been installed since 2003. The description should include, but is not limited to, date of installation of such controls; identification of periods and basis for when the controls did not operate at peak efficiency; identification of efficiency of efficiency of controls from the date of installation through the phase in period of such controls. Define peak efficiency.

U. S. Steel Response to Request No. 2:

Person(s) : that provided information used or considered in responding to the question or were consulted in the preparation of the response:

Chrissy Bartovich, Stephani Campbell

CEMS were installed and certified on Line 5 on February 1, 2007 which allowed the facility to accurately measure NO_x emissions from the indurating furnaces.

Line 5 preheat burners were upgraded to low NO_x preheat burners on September 20, 2008.

As a conceptual test based on the theory of the designed low NO_x burner planned for installation on Line 7, a small blower to add air to the burner was installed on Line 5 in November 2009. For optimum NO_x reduction, a larger blower was then installed in April 2010, and a modification to the draft tube which is associated with the main burner was modified in June 2010. We took further action in 2015 to increase the air to fuel ratio to further reduce NO_x. The designed low NO_x main burner was installed during an outage in December 2015, with start up on December 20, 2015. This new low NO_x main burner is different both in manufacturer, design and operation than the original installations on Lines 6 and 7. Line 5 is permitted to burn natural gas, biomass and fuel oil; but not coal as are Lines 6 and 7. U. S. Steel has not completed its final evaluation of the Line 5 low

NOx main burner and has agreed to provide MPCA a report regarding the project by September 30, 2016. U. S. Steel also plans to continue to evaluate the effects of burning biomass. U. S. Steel notes that it does not currently have a definition of “peak efficiency.” U. S. Steel further notes that the term “peak efficiency” can be interpreted differently and may also be dependent on the fuels burned, seasonality, and the various operating factors that occur during combustion such that there is no single definition of “peak efficiency.”

U.S. EPA Request No. 3:

For indurating furnace lines 3 and 4, describe the planned control and/or NO_x emission reduction technologies expected to be installed. Provide a detailed explanation for why the specific technology was selected and the expected date of installation.

U. S. Steel Response to Request No. 3:

Person(s) : that provided information used or considered in responding to the question or were consulted in the preparation of the response:

Chrissy Bartovich, Stephani Campbell

Lines 3 and 4 are expected to be retrofitted with a low NOx main burner technology. This is a requirement of Title V air permit 13700005-006. Minntac was required to pilot test potential NOx control technologies as nothing had been proven or installed for the taconite industry. After an unsuccessful test of Selective Non-Catalytic Reduction, U. S. Steel proposed pilot testing of a low NOx main burner. The initial installation was on Line 7. After a second installation on Line 6, a permit modification application was submitted for installation on Lines 4 and 5. For the site-specific conditions at Minntac the low NOx main burner technology was the technology to pursue. SNCR was unsuccessful; SCR vendors declined to bid, and other technologies were, and currently remain, in the innovative stage. The successful installation of Low NOx burners at Minntac is that due to the airflow and size of the system, process fans were not required to be upgraded, only the main waste gas fan required a minor modification to balance the new system airflow. Other than that the line was capable of handling the extra air without quality issues and did not have the drastic cost of upgrading process fans.

The Line 4 low NOx main burner is expected to be installed in conjunction with the major campaign on that line, which is currently scheduled for late 2016. Line 3 cannot be installed until after a major permit modification is received by MPCA. The timing of this permit is at the discretion of MPCA. In addition, permitting and installation schedules need to reflect required plant outage schedules that are necessary to complete the required installations and related work. For these reasons, a final installation date for Line 3 is not currently known and cannot reasonably be provided at this time.

The specific technology that was selected for Line 3 and will be selected for Line 4 is unique to the line, reflecting the individual differences among the furnaces. U. S. Steel has found, consistent with a case-by-case BART determination, that installing low NO_x burners is an iterative process, with each line needing to be addressed separately. For Line 5, the configuration allowed U. S. Steel to use existing process fans, allowing the

specific approach selected. At this time, U. S. Steel does not anticipate the same will be true for Line 4.

U.S. EPA Request No. 4:

For indurating furnace lines 6 and 7, provide emissions data, in lbs NO_x/MMBTUs on both an hourly average and as 720-hourly averages, from the last time period previously submitted to EPA in October 2015, to present.

U. S. Steel Response to Request No. 4:

Person(s) : that provided information used or considered in responding to the question or were consulted in the preparation of the response:

Stephani Campbell, Steven Maslo

Hourly data for Lines 6 and 7 are provided in this request dating back to July 24, 2015 which dates back to the last date of the previously submitted data. The combustion operating scenario is identified for each hour. Pellet type is not indicated since these lines have only produced flux pellets. U. S. Steel does not currently record a 720 hourly average by fuel type, therefore only hourly data is provided. Data substitution consistent with State reporting requirements is utilized in the attached spreadsheet.

U.S. EPA Request No. 5:

Provide all documentation, including, but not limited to, studies relating to technical feasibility and reports or proposals from manufacturers or engineering firms, pertaining to the application of selective non-catalytic reduction (SNCR) technologies to the indurating furnaces operated at the Minntac facility.

U. S. Steel Response to Request No. 5:

Person(s) : that provided information used or considered in responding to the question or were consulted in the preparation of the response:

Chrissy Bartovich, Stephani Campbell

U. S. Steel Minntac performed a pilot test of SNCR on Line 7 in 2009. The conclusion from the test was that our indurating process did not have the necessary time and or temperature profile for this technology to be successful. This report was submitted under item 8 in U. S. Steel's response to the April 2012 EPA Section 114 Request that was submitted to the Agency on April 24, 2012. All information in U. S. Steel's possession that is responsive to this request has been provided to U.S. EPA already. However, for the Agency's convenience, it is included in response to this request as well.

U.S. EPA Request No. 6:

Provide all documentation pertaining to any NO_x control method or NO_x control device that has not already been provided in response to Item 5 of this Information Request, EPA's April 2012 Information Request, or provided to EPA Region 5 since April 2012. This documentation should include, but is not limited to, studies, reports, and all communications, including, but not limited to, e-mail or correspondence received from or directed to USS and any engineering firm, or NO_x emission control manufacturing entity.

U. S. Steel Response to Request No. 6:

Person(s): that provided information used or considered in responding to the question or were consulted in the preparation of the response:

Chrissy Bartovich, Stephani Campbell, Teresa Simetkosky, Ben Cook, Darren Gietzen, Kraig Raiber

U. S. Steel reviewed documents and communications from the period of April 2012 to present relating to NO_x control methods and devices. Responsive substantive communications and documents that were received from or directed to USS with any engineering firm or NO_x manufacturing entity are included as part of this request.

A certification statement regarding this correspondence, signed by the General Manager of U.S. Steel Minnesota Ore Operations is attached. If USEPA has any questions related to the information submitted, please feel free to contact Chrissy Bartovich at (218) 749-7364.

Sincerely,

A handwritten signature in blue ink, appearing to read "M. Hake", with a long horizontal line extending to the right.

Enclosures

cc: C. Bartovich (USS)
S. Campbell (USS)
D. Smiga (USS) – cover letter only
T. Woodwell (USS) – cover letter only
C. Hardin (USS)
B. Tunno (USS)

CERTIFICATION

I certify under penalty of law that I have examined and am familiar with the information in the enclosed documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to Section 113(c)(2) of the Clean Air Act and 18 U.S.C. §§ 1001 and 1341

Signature: _____

Printed: Travis Kokini, Acting General Mgr, Minnesota ore
Name and Title